

“DROP-OUT” IN THE DANISH HIGH SCHOOL (GYMNASIUM): AN INVESTIGATION OF PSYCHOLOGICAL, SOCIOLOGICAL AND PEDAGOGICAL FACTORS

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Abstract — The aim of the study was to investigate characteristics differentiating high-school students who had dropped out of school from those who remained.

The study examined the relationship between drop-out and the following three clusters: (1) the effect of family background factors; (2) the effect of social factors in the educational milieu; and (3) the effect of motivation, achievement and ability.

It was concluded that neither the effect of family background nor exposure to factors in the educational milieu were significant in the decision to finish school. One of the main conclusions of the investigation was that drop-out was associated with lack of motivation and achievement of the students.

Zusammenfassung — Ziel dieser Studie war, charakteristische Eigenschaften herauszufinden, die vorzeitige Schulabgänger von Gymnasien von Schülern, die auf der Schule bleiben, unterscheiden.

Die Studie untersuchte Beziehungen zwischen Abgängern und den folgenden drei Lebensumständen: 1. dem Einfluß des familiären Hintergrunds, 2. der Auswirkung sozialer Faktoren im pädagogischen Bereich, 3. den Wirkungen von Motivation, Erfolg und Fähigkeit.

Man fand heraus, daß weder familiäre Verhältnisse, noch Einflüsse im erzieherischen Bereich für die Entscheidung, die Schule zu verlassen, maßgeblich waren. Eines der wichtigsten Ergebnisse der Untersuchung war, daß der Schulabgang mit einem Mangel an Motivation und Leistung der Schüler zusammenhing.

Résumé — L'objectif de la présente étude était d'examiner les caractéristiques différenciant les élèves des collèges ayant abandonné prématurément leurs études de ceux les ayant terminées. L'étude était focalisée sur le rapport entre l'abandon et les trois groupes suivants: 1. L'influence des facteurs relatifs au milieu familial. 2. L'influence des facteurs sociaux sur le milieu éducatif. 3. L'influence de la motivation, de l'acquis et de l'aptitude.

Ces recherches ont permis de conclure que ni l'influence du milieu familial, ni celle des facteurs du milieu éducatif n'agissent sur la décision de terminer l'école. Une des conclusions majeures de cette recherche est que l'abandon scolaire est associé à un manque de motivation et de résultats positifs chez les élèves.

The reasons which motivated the study reported here (Dohn 1989) were:

- firstly, no national investigation of drop-out from the Danish high school has previously been carried out. Only drop-out studies in local school districts have been published (Pedersen 1980; Togeby 1981).
- secondly, the enrollment of new students in upper secondary schools has increased heavily during the last part of the 1970's and the beginning of the 1980s. Therefore, it was important to elucidate whether the incre

mental increase had any impact on the magnitude and distribution of drop-out from high school. In this period a substantial proportion of the students admitted came from homes where the parents had an educational level lower than high school.

During the last 25 years there has been a great increase in the number of persons with an upper secondary school leaving examination. In 1960 4,500 or five per cent of the cohort successfully completed the gymnasium. In 1985 the figure was 26,200 or a little more than one third of the cohort (Education in Denmark 1989). The last figure also includes persons with the Higher Preparatory Examination (see below).

The drop-out rate is about 15 per cent for students enrolled in their first year of high school, a figure which has been rather constant until recently, when it has begun to increase. As a percentage the drop-out rate in the Danish high schools represents a minor problem. However, the actual number of students dropping out is of importance, and for the individual student may be of lasting consequence.

From a comparative perspective the drop-out rate is moderate, especially compared with that of the USA, where drop-out rates over 25 per cent are frequently recorded (Mann 1986; Ekstrom et al. 1986). The Swedish upper secondary school, more akin to the Danish system though different from it in certain important respects, also records a somewhat higher drop-out rate (Söderberg 1979; Arvidson and Söderberg 1980).

However, a direct comparison of drop-out rates from different countries is of limited use because:

- drop-out criteria and methods of calculating drop-out rates vary from country to country. This problem is also known in national investigations (cf. Hammack 1986; Marrow 1986). The present study noticed similarly that various authorities used different criteria;
- the aims of education at upper secondary level differ. As pointed out for example by Hamilton (1986), the high school in the USA is the only type of institution which provides education at this level, whereas upper secondary education in many European countries, including Denmark, is divided into two main types: the gymnasium, preparing students for higher education, and the vocational education school qualifying students for work in trade and industry. This means there is a choice when entering upper secondary education;
- drop-out rates and drop-out causes are related to admission requirements for the high school. Compared to countries where severe admission criteria are applied, less rigorous admission criteria seem to involve higher drop-out rates.

The Danish High School (Gymnasium)

The Danish high school, or gymnasium, provides education preparing

students for further and higher education. In addition, there is the possibility of taking the Higher Commercial Examination, or the two-year course leading to the Higher Preparatory Examination. Among these three types of upper secondary education the courses at high school are the most common. The present study only deals with drop-out in high school.

The students usually enter high school at the age of 15 or 16, having completed the 9th or 10th grade of the elementary and lower secondary school. To be admitted to high school, the students must pass the Leaving Examination, demonstrating that they are "qualified" or "supposedly qualified" for studies at high school.

The high school curriculum is divided into two main lines, Modern Language and Science. After the first of three years of study at high school the students can choose among seven different branches of the two main lines. A reform introduced in 1988 replaces the former branches by elective subjects which the students may follow at two levels. Two subjects must be studied at the highest level.

Conceptual Framework

The investigation was carried out in order to examine factors and variables relevant to the student's decision to remain at school or to drop out of school. No single theory can explain the relationship between variables and the drop-out process. Most of the theoretical assumptions, as far as they exist, have their origin in various elements of psychology, education, and sociology.

It was assumed that a connection exists between drop-out and the factors listed below:

1. The socio-economic level of the student's home. Studies have shown that a higher percentage of students admitted into high school come from homes of a higher socio-economic level (e.g., Hansen 1973). It was to be examined whether that factor is reflected in the drop-out rate.
2. The intention, determination, and perspective of the students as well as the achievements and grade performance in high school. Other studies have shown a positive relationship between motivational factors and school performance (Rand 1965; Lysne 1972). A connection between lack of determination and drop-out has also been pointed out (e.g., Saenger-Chea 1972).
3. The abilities of the students. Having completed elementary and lower secondary school, a declaration is issued to the effect that the students are "qualified", "perhaps qualified" or "not qualified" for studies at high school. On the basis of a small Danish sample (Togebly 1981) a higher drop-out rate among the "perhaps qualified" than among the "qualified" students was found. The validity of that declaration in predicting drop-out was to be examined.

4. The individual's self-esteem. The point of view, expressed by G. H. Mead, that the individual's self-esteem reflects the assumed attitude of others has been considered of importance in explaining drop-out. Several investigations (e.g., Rosier 1978) have examined the association between low self-esteem and drop-out.
5. The social integration of the students into the educational milieu of the school. Following Durkheim's theory of social integration, several major studies (e.g., Spady 1971; Tinto 1975) have related, empirically or conceptually, the lack of social integration in the school environment to drop-out. Among the factors to be examined defining the school environment was the relationship to school staff and fellow students as well as the size of the student population, and whether the school is located in a metropolitan or rural area.

Method

Methodological Issues

By means of an ex-post-facto research design, drop-out students were compared to a sample of students remaining at high school. Data was collected by means of questionnaires and interviews. In addition, statistical information was made available by the Ministry of Education and Research.

As the research design and the data collection means are considered soft, care was taken to impose methodological control at various points.

It was demonstrated that the control group was comparable to the group of drop-out students with respect to the following background characteristics: sex, age, line of study, and grade.

The possibility exists that the drop-out students are affected by what is called an ex-post-facto effect. Taking this possibility into consideration, the group of remainers were split into those students who never considered dropping out, and those who at one point during their high school years considered dropping out. These students were, strictly speaking, not exposed to the ex-post-facto effect. If members of this group gave answers to the questionnaire which resembled those of the drop-out students, the argument proposed was that it supported the credibility of the drop-out answers.

Sampling and Administration

The number of subjects of the drop-out sample was 1,078 and the control group (students remaining at high school) numbered 1,093 subjects. This group constituted a total of approximately 1.5 per cent of the student population of about 65,000 students enrolled in high school. The drop-out sample amounted to roughly one third of the total number of drop-outs.

Interviews were conducted with 107 students who remained at school, and with 14 drop-out students.

The questionnaires given to the control group were administered through the selected schools, and the questionnaires given to drop-out students were either mailed or handed over when the students finished school.

Major Findings

Background Characteristics of the Total Population Investigated

When they were matched on the variables listed below, it was demonstrated that the population investigated (i.e., the drop-outs together with the remainers) formed a representative sample of the total population of the students admitted into the gymnasium. The background characteristics of these students, considered as typical for the total student population are:

- *High school:* There was an overloading, by some 15 per cent, of female students to male students. Two thirds of the students studied the science line, and one third the modern language line. Almost 90 per cent of the students were admitted into the particular high school which was their first choice.

The geographical distance between home and high school was generally not so great as to incur any significant transportation problem: two thirds of the students required less than half an hour to reach their high school.

- *Leisure job:* About 60 per cent of the students held leisure jobs during the school year, although few worked more than ten hours a week. Also, for the great majority, the income served as a supplement to their pocket money.
- *Family background:* Some 90 per cent of the students lived with their parents or with other relatives (the percentage is significantly less for the drop-out students). About 50-60 per cent of the students came from families where neither parent nor siblings were graduates from high school.

The study confirmed that the recruitment to high school is uneven. The socio-economic level, defined through the occupation of the father, was higher for students admitted to high school compared to the rest of the population. The comparable difference concerning the occupational level of the mother was negligible.

1. *The Socio-economic Level and Drop-out*

Three sources of data were used to examine the connection between socio-economic level of the family and drop-out: statistical data on the geograph-

ical and socio-economic distribution of drop-out, information collected by means of the questionnaires, and interviews.

A sample of high schools situated in two geographic areas surrounding Copenhagen was formed, representing respectively a socio-economic level of above average and average. Table 1 depicts the mean drop-out rate for three consecutive years for each area. Only a slight connection between drop-out and the location of a school is noticed.

Table 1. Drop-out rates* in per cent in two geographic areas.

	SE level of above average	Average SE level
Number of high schools	11.0	7.0
Mean	19.6	22.4
Median	19.3	23.3
Lowest drop-out rate	11.7	12.3
Highest drop-out rate	30.1	29.2

* Students migrating from one high school to another (approximately 5 per cent) are included in these figures.

The questionnaire data demonstrated a minor — though significant — difference between drop-out students and remainers, with regard to maternal occupation, and a difference of significance as to paternal occupation: there was a greater percentage of the drop-outs who had fathers with a lower occupational status.

Table 2 presents the relationship between the parents' occupation and drop-out.

The cultural and educational factors apparently played the more important role. From Table 3, it can be seen that among the drop-outs a higher percentage come from homes with parents having a lower educational level than from homes with parents having an upper secondary school leaving examination, compared with the remainers. A lower level was taken to mean that neither parents nor siblings were graduates from high school.

The interview data gave some support to this finding. The possibility that the students were able to obtain aid from their parents with regard to homework, was given a considerable psychological importance. On the other hand, there were indications that students from families with a lower educational level might be under pressure to demonstrate a social climb.

It was concluded that when the student was admitted into high school, the socio-economic level of the family played a minor role in determining the chance of drop-out.²

Table 2. The parents' occupation and drop-out.

Maternal occupation	Drop-outs N	Remainers N
Self-employed	67	89
Executive	127	128
Salaried employees	205	264
Skilled workers	106	79
Unskilled workers	142	133
Assisting in husband's business	57	96
Housewives	155	186
Other categories	169	91
Unknown	50	27
Total	1078	1093
Chi-value 50.26, $p < 0.05$		
Paternal occupation	Drop-outs N	Remainers N
Self-employed	218	320
Executive	318	363
Salaried employees	97	142
Skilled workers	137	82
Unskilled workers	87	56
Other categories	112	68
Unknown	109	62
Total	1078	1093
Chi-value 66.23, $p < 0.05$		

2. Motivation, Achievement, Grade Performance and Drop-out

The questionnaire requested the students to state the reasons for applying for admission to high school. On the basis of the answers the students could be described on the following dimensions:

- *Internalization*: The degree to which the desire to be admitted into high school expressed the student's own wishes vs. those of family, peers, elementary and lower secondary school teachers.
- *Goal directedness*: The weight given to the fact that the successful completion of high school is a requirement for further studies.
- *Perspective*: The importance given to the high school as a means to fulfill career plans.

Table 4 summarizes the results of analyses comparing the drop-out students with remainers, and comparing the subgroup who considered drop-

Table 3. The educational level of the students' homes.

	Drop-outs N	Remainers N
Parents or siblings graduates from high school	427	542
Neither parents nor siblings graduates from high-school	637	545
Unknown	14	6
Total	1078	1093
Chi value 20.57, $p < 0.05$		

Table 4. Chi tests of the relationship between the three motivational dimensions and dropping out/remaining.

Dimension	Chi value	p	Direction
Internalization			
Own wishes	206.04	< 0.05	Remainers higher
Family	130.56	< 0.05	Drop-outs higher
Peers	6.75	n.s.	(Drop-outs higher)
Teachers	78.80	< 0.05	Remainers higher
Goal directedness	90.44	< 0.05	Remainers higher
Perspective	157.90	< 0.05	Remainers higher

out, with the drop-out students, and with the remainers who never considered drop-out.

The analyses showed considerable differences between the drop-outs and the remainers. The remainers could be described as scoring higher on the three dimensions than the drop-outs. The subgroup who considered drop out could be depicted as being goal directed, but the desire to be admitted into high school was less internalized, and the perspective of these students was vaguer.

The first part of proposition two (relationship between intention, determination and drop-out) was confirmed, connecting drop-out with a lack of determination on the part of the students at the time of admission into high school. This conclusion was supported by the statements given in the interviews.

The questionnaire also demonstrated that the drop-outs, compared to the remainers, reported lower achievements, spent less time on homework, and were absent from school more frequently. They were told to improve

achievements more often, generally felt less involved in school work, and claimed that the workload and requirements were high.

The results of the analyses are presented in Table 5. It should be noted that the subgroup who considered drop-out showed a distribution across all dimensions more like the drop-out students than the remainers not considering drop-out, thus corroborating the validity of the drop-out answers.

The second part of proposition two was confirmed, relating drop-out with a lack of achievement and unsatisfactory grade performance.

Table 5. Chi tests of the relationship between achievement, grade performance and dropping out/remaining.

Dimension	Chi value	p	Direction
Achievement	104.72	< 0.05	Remainers higher
Grade performance	244.78	< 0.05	Remainers higher
Homework	120.72	< 0.05	Remainers higher
Absence from school	369.97	< 0.05	Drop-outs higher
Told to improve	112.00	< 0.05	Drop-outs higher
Involvement	114.94	< 0.05	Remainers higher
Requirements too high	163.98	< 0.05	Drop-outs higher

3. Ability and Drop-out

It was demonstrated that an association exists between the assessment by the elementary and lower secondary school predicting whether the students were “qualified” or “perhaps qualified” for study at high school. As recorded in Table 6, there were more drop-out students, who had been declared “perhaps qualified”, than there were among the remainers.

Table 6. The assessment of the students by the elementary and lower secondary school.

	Drops-outs N	Remainers N
Not qualified	17	8
Perhaps qualified	208	74
Qualified	752	973
Unknown	101	38
Total	1078	1093

Chi value 92.37, $p < 0.05$

It seemed that the validity of the prediction as to the qualifications of the students was reasonably high. Unfortunately, it was impossible to test whether the negative part of the prediction held true, as very few declared "not qualified" were found in the sample investigated.

Also, attention should be drawn to the fact that positive assessment was no guarantee that a student would complete high school.

4. *Self-esteem and Drop-out*

The variable self-esteem was derived from responses to two test items. One concerned the student's assessment of his own self-esteem, and the other the assessment of the attitude of other individuals toward him, cf. the so-called attitude of the generalized other. As shown in Table 7, only a slight — though significant — difference was found between the groups as to self-esteem.

Table 7. Chi tests of the relationship between the assessment of self-esteem and dropping out/remaining.

Dimension	Chi value	p	Direction
Assessment of his/her own self-esteem	17.07	< 0.05	Remainers higher
Attitude of the generalized other	16.14	< 0.05	Remainers higher

5. *Social Integration, the Educational Milieu and Drop-out*

The assumption was that a connection existed between drop-out and the level of social control in the educational milieu. Unfortunately, the available statistical data could only partly elucidate the issue and consequently the results from only that part of the analysis are summarized below.

It was shown that the administrative body to which the high school belonged, either the state, the county or private ownership, was irrelevant as a single factor for drop-out. There was a slight relationship between drop-out and the size of the student population in a high school. The rate of drop-out seemed to be higher at smaller and larger high schools than at medium-sized schools.

The drop-out rate was highest in the metropolitan area and lowest in rural areas. The drop-out rate increased where the percentage of students admitted into high schools was highest, typically in the metropolitan area. In rural areas, where the tradition for prolonged schooling is weakest, drop-out is also likely to imply a more severe break from any future education.

Although the data were inadequate, it was shown that the drop-out rate varied considerably from school to school, and with much more magnitude than should be expected on the basis of the impact of social factors. The

questionnaires and the interview data suggested that high schools differed in respect of required level of achievement and discipline, signifying that pedagogical and social-psychological factors contributed to some extent. Also, there were some indications hinting that elementary and lower secondary schools prepared the students differently for high school.

Looking at the closer educational milieu, the questionnaire data showed that only a small fraction of drop-out students felt themselves excluded by their classmates, though more drop-out students than remainers found less solidarity among classmates. It seemed that most differences between the two groups were associated with the judgements of the sentiments of the class. More drop-out students described the sentiments of the class as egoistic. Contrary to the general expectation, rather few students, drop-outs as well as remainers, argued competition among classmates. Table 8 summarizes the results of the comparison between the drop-outs and the remainers.

It seemed that the drop-out students had more reservations concerning their judgement of the teacher/student relationship, and of the freedom and openness of the educational milieu. The results of the analysis are presented in Table 9.

As is shown in Table 10, only slight differences were found when comparing drop-outs and remainers as to extra-curricular activities, isolation in the context of family relationship, and boy/girl friends. However, it should be kept in mind that more drop-out students were living in separation from their families than the remainers.

Table 8. Chi tests of the relationship between social integration in the educational milieu and dropping out/remaining.

Dimension	Chi value	p	Direction
Excluded by classmates	131.22	< 0.05	Drop-outs higher
Solidarity among classmates	47.44	< 0.05	Remainers higher
Class sentiments described as egoistic	109.48	< 0.05	Drop-outs higher

Table 9. Chi tests of the relationship between the judgement of the educational milieu and dropping out/remaining.

Dimension	Chi value	p	Direction
Judgement of the teacher/ student relationship	—	—	Remainers higher
Discipline	51.88	< 0.05	Drop-outs higher
Participation in decision-making	13.29	< 0.05	Remainers higher
Judgement in the teaching style	43.81	< 0.05	Remainers higher

Table 10. Chi tests of the relationship between social integration and dropping out/remaining.

Dimension	Chi value	p	Direction
Participation in extra-curricular activities	—	—	Remainers higher
Isolation in context of family and friends	—	—	Equal
Living in separation from families	45.91	< 0.05	Drop-outs higher

In the students' decision whether to finish school, it was concluded that neither the level of social control or social integration nor exposure to the educational milieu at a high school were factors of greater importance than those mentioned earlier.

Summary and Conclusions

The decision to leave or to remain in high school has important consequences with respect to the range of educational and occupational options available to a student in the future.

As one of the major findings of the study, an association was pointed out between drop-out and a lack of determination on the part of students at the time when they were admitted into high school.

As the research methodology was vulnerable to an ex-post-facto distortion in the answers of the drop-out students concerning the reasons for drop-out, care was taken to impose methodological control concerning that effect.

The finding that drop-out students scored lower than the remainers on the three motivational dimensions, internalization, goal directedness, and perspective, was corroborated by the findings that a greater proportion of these students showed a lack of achievement and unsatisfactory grade performance. In addition, a greater proportion of the drop-out students had more reservations concerning the educational milieu as well as the judgement of the teacher/student relationship. Despite facing more serious problems of achievement and discipline than the remainers, only a small fraction of these students felt themselves excluded by their classmates.

In a broader context the drop-out students could be said to be equally as well integrated into the social fabric as the remainers. Likewise, the self-esteem of the drop-out students was apparently affected to only a minor degree.

Although the findings of this study point to lack of motivation, achievement and potential ability as factors decisive for drop-out, the importance of social factors cannot be neglected. It has been demonstrated that drop-out is related to the socio-economic and cultural background of the family and to the level of social control in the milieu.

The Danish education system is nevertheless flexible enough not to allow a decision to finish high school to result in a young person's forever forfeiting the possibility of pursuing education at an upper secondary level. Anyone over the age of 18 has the right to sit the Higher Preparatory Examination, which is an important "second-chance" provision. It seems that a major part of the drop-out students were aiming to participate in one or other type of upper secondary education, contributing to a reduction in the cumulative drop-out rate.

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